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ROYAL ONTARIO MUSEUM OF PALAEONTOLOGY

# No. 10 CATALOGUE OF TYPES IN THE ROYAL ONTARIO MUSEUM OF PALAEONTOLOGY

By Madeleine A. Fritz

PART VI

SEPTEMBER, 1946

# CATALOGUE OF TYPES IN THE ROYAL ONTARIO MUSEUM OF PALAEONTOLOGY

By Madeleine A. Fritz
Associate Director of Palaeontology

## PART VI

Five parts of the Catalogue of Types in the Royal Ontario Museum of Palaeontology have been published since 1941. They constitute Contributions of the Royal Ontario Museum of Palaeontology, Nos. 5, 6, 7, 8, and 9. These issues cover the biological groups from the *Protozoa* to the end of the *Trilobita* . Part VI, the present number, concludes the series and constitutes Contribution, No. 10, of the Royal Ontario Museum of Palaeontology. It includes the remaining *Arthropoda*, which are chiefly *Branchiopoda* . Of the latter group the Cambrian bivalved *Crustacea* , the *Conchostraca* , are the most abundantly represented. These specimens belong to the famous collection of fossils made a half century ago by Dr. George F. Matthew from classic localities in the Maritime Provinces.

In addition to the above mentioned types, this issue contains a few *Plantae* as well as a rather extensive *Addenda*.

The form of the Catalogue is the same as that used in the former members. The generic and specific names, in capital letters, are those known by the writer to be in use at the present time. Then follow in order the author of the species, the number of specimens, the old name (in italices) when such occurs, literature reference, the general geological age, the more specific horizon, the locality, and the catalogue number. Both

genera and species are alphabetically arranged.

It should be pointed out that exception may be taken to the geological horizon recorded for certain species. As an example of a discrepancy in this connection might be cited the material from Hanford brook, St. Martins, New Brunswick. In all but the present issue, fossils from these rocks are recorded as Middle Cambrian (Acadian). Here they are listed, with but three exceptions, as Hanfordian, which is now generally considered to be of Lower Cambrian age.

In addition to the horizon, a difference of opinion may be held with regard to the name of the type used, particularly in the case of some of the older specimens. In Matthew's work, for instance, the types are not designated. Furthermore, his descriptions and figures often fail to clarify the situation. It has been difficult, therefore, in many instances, to fit his specimens into the many varieties of types recognized at the present time. Cotypes might on occasions be better separated into holotypes and paratypes. Again, where many cotypes are listed, some possibly fall into the category of heautotypes, metatypes, or topotypes.

Although the older palaeontologists have often failed to discriminate among their type specimens, contemporary workers are by no means innocent of the same offence. At the conclusion of this Catalogue, therefore, in which approximately fifteen hundred specimens are involved, I should like to urge upon all authors the careful marking of their types. By so doing many difficulties will be eliminated and the work of future palaeontologists will be greatly facilitated.

BRANCHIOPODA

ALUTO FLEXILIS Matthew -- Holotype
Matthew, G.F., Trans. N.Y. Acad. Sci.,Vol. XV,1896, p. 198, pl. XV, fig. 4.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 52, pl. VIII, figs. 13,14.
Middle Cambrian, Acadian.
Porter's brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 8112.
(Also the genotype)

BEYRICHONA OVATA Matthew -- Holotype
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 135, pl. VII, fig. 8.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 47, pl. VII,fig. 10.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7767.

?BEYRICHONA OVATA Matthew -- ?Onomatype
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 47.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
?Onomatype - Roy. Ont. Mus. Pal. 26287.

BEYRICHONA PAPILIO Matthew -- Holotype (cast & mold)
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV,1885, p. 65,pl. VI, figs. 20,20a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 43, pl. 7, fig. 5.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7744.
(Also the genotype)

BEYRICHONA PAPILIO Matthew -- Topotypes 2

Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV, 1885, p. 65.

Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931,p. 44 (in description of *B. tinea triangula)* .

Lower Cambrian, Hanfordian.

Hanford brook, St. Martins, New Brunswick.

Topotypes - Roy. Ont. Mus. Pal. 26288.

BEYRICHONA ROTUNDATA Matthew -- Cotypes 2

Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 136, pt. VII, fig. 9.

Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 46, pl. VI, fig. 12.

Lower Cambrian, Hanfordian.

Hanford brook, St. Martins, New Brunswick.

Cotypes - Roy. Ont. Mus. Pal. 7750.

BEYRICHONA? RUTELLUM (Matthew) -- Holotype

*Escasona rutellum* Matthew

Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 458, pl. II, figs. 5a-c.

Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 48, pl. III, fig.21.

Lower Cambrian, Etcheminian.

Indian brook, Cape Breton, Nova Scotia.

Holotype - Roy. Ont. Mus. Pal. 7785.

BEYRICHONA TINEA Matthew -- Cotypes 5

Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV, 1885, p. 66, pl. VI, figs. 21,21a,b.

Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 43, pl. VII, fig. 4.

Lower Cambrian, Hanfordian.

Hanford brook, St. Martins, New Brunswick.

Cotypes - Roy. Ont. Mus. Pal. 7748.

(One plastotype as well)

BEYRICHONA cf. TINEA Matthew -- Onomatype
*Beyrichona rotundata* Matthew
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 46 (refers to spec. C.).
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Onomatype - Roy. Ont. Mus. Pal. 26290.

BEYRICHONA TINEA PLANATA (Matthew) -- Cotypes 4
*Beyrichona planata* Matthew
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 134, pl. VII, fig. 7.
Ulrich, E.O., & Bassler,R.S., Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 45, pl. VI, fig. 4; pl. VII, figs. 1,2.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8243.

BEYRICHONA TINEA TRIANGULA (Matthew) -- Holotype
*Beyrichona triangula* Matthew
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 135, pl. VII,fig. 5 (composite drawing, does not represent this specimen above).
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7749.

BEYRICHONA TRICEPS (Matthew) -- Cotype
*Beyrichia triceps* Matthew
Matthew, G.F., Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 219, pl. XVI, figs. 4a-c.
Middle Cambrian, Johannian.
McLean brook, Mira river, Cape Breton, Nova Scotia.
Cotype - Roy. Ont. Mus. Pal. 8535.
(Probably used in above composite drawing)

BEYRICHONA TRICEPS (Matthew) -- Cotype
*Beyrichia triceps* Matthew
Matthew, G.F., Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 219, pl. XVI, figs. 4a-c.
Middle Cambrian, Johannian.
McLean brook, Mira river, Cape Breton, Nova Scotia.
Cotype - Roy. Ont. Mus. Pal. 7689.
(Probably used in above composite drawing)

BEYRICHONA TRICEPS (Matthew) -- Cotype
*Beyrichia triceps* Matthew
Matthew, G.F., Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 219.
Middle Cambrian, Johannian.
McLean brook, Mira river, Cape Breton, Nova Scotia.
Cotype - Roy. Ont. Mus. Pal. 7687.

BEYRICHONA TRICEPS (Matthew) -- Cotype
*Beyrichia triceps* Matthew
Matthew, G.F., Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 219.
Middle Cambrian, Johannian.
McLean brook, Mira river, Cape Breton, Nova Scotia.
Cotype - Roy. Ont. Mus. Pal. 7690.

BRADORIA ACUTA (Matthew) -- Cotypes 3
*Schmidtella acuta* Matthew
Matthew, G.F., Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 173, pl. XIII, figs. 12a-c.
Ulrich, E.O., & Bassler, R.S., Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 19, pl. I, fig. 25.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7789.

BRADORIA ACUTA (Matthew) -- Metatypes 2
*Schmidtella acuta* Matthew
Matthew, G.F., Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 173.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Metatypes - Roy. Ont. Mus. Pal. 7702.

BRADORIA BENEPUNCTA (Matthew) -- Cotypes 3
*Bradorona observator benepuncta* Matthew
Matthew, G.F., Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 161, pl. XII, fig. 16.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 18, pl. I, fig. 16.
Lower Cambrian, Etcheminian.
Boundary brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7701.

BRADORIA CAMBRICA (Matthew) -- Cotypes 2
*Schmidtella cambrica* Matthew
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 137, pl. VII, figs. 10a,b.
Ulrich, E.O., & Bassler, R.S., Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 28, pl. 1, fig. 10.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 7745.

BRADORIA CONCINNA (Matthew) -- Holotype
*Schmidtella (?) pervetus concinna* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 464; Geol. Sur. Can., 1903, "Camb. Rocks Cape Breton," p. 173.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 28.
Lower Cambrian, Etcheminian.
Boundary brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 7718.

BRADORIA MINOR (Matthew) -- Holotype
*Leperditia ? minor* Matthew
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 138, pl. VIII, figs. 4a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 29, pl. I, fig. 22.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 8348.

BRADORIA OBESA (Matthew) -- Holotype
*Bradoria vigilans obesa* Matthew
Matthew, G.F., Can. Rec. Sci., Vol.VIII,1902,p.455.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 27, pl. I, fig. 27; pl. III, fig. 13.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 8319.

BRADORIA OBESA (Matthew) -- Metatypes 2
*Bradoria vigilans* Matthew
Matthew, G.F., Bull. Nat. Hist. Soc. N.B., No. 18, 1899, p. 205.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 16.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Metatypes - Roy. Ont. Mus. Pal. 26292.
(Specimens A & B of Matthew's types)

BRADORIA OCULATA (Matthew) -- Holotype
*Primitia oculata* Matthew
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 136, pl. VIII, figs. 2a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 16, pl. I, figs. 13, 14.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 8347.

BRADORIA ? ORNATA Matthew -- Holotype
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 456, pl. II, figs. 4a-c.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 7703.

BRADORIA OVALIS (Matthew) -- Holotype
*Indiana ovalis* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 461, pl. II, figs. 8a-c.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 21, pl. I, fig. 18; pl. III, fig. 6.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Holotype- Roy. Ont. Mus. Pal. 7717.

BRADORIA PERSPICATOR (Matthew) -- Cotypes 4
*Bradorona perspicator* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 444, pl. I, figs. 8a-d.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 24,pl. I,figs. 6-9; pl. III, fig. 12.
Lower Cambrian, Etcheminian.
Boundary brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7723.

BRADORIA PERSPICATOR (Matthew) -- Metatypes 7
*Bradorona observator* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 448, pl. I, figs. 15a-c.
Ulrich, E.O., & Bassler, R.S., Proc. U.S. Nat.Mus., Vol. LXXVIII, Art. 4, 1931, p. 24.
Lower Cambrian, Etcheminian.
Boundary brook, Escasonie, Nova Scotia.
Metatypes - Roy. Ont. Mus. Pal. 7705.
(Original cotypes of *B. observator* Matthew)

BRADORIA "PRIMAEVA" (Matthew) -- Holotype
*Beyrichia primaeva* Matthew
Matthew, G.F., Trans. Roy. Soc. Can., 2nd ser.,Vol. IV, Sect. IV, 1898, p. 133, pl. I, figs. 2a-c.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 29, pl. I, fig. 29.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7757.
(Too poor for accurate identification)

BRADORIA ROBUSTA (Matthew) -- Cotypes 3

*Aparchites (?) robostus* Matthew

Matthew, G.F., Trans. Roy. Soc. Can., 2nd ser.,Vol. IV, Sect. IV, 1898, p. 132, pl. I, figs. 4a-c.

Ulrich, E.O., & Bassler, R.S., Proc. U.S. Nat.Mus., Vol.LXXVIII,Art.4,1931,p. 22,pl. I,fig.1 (Spec. A).

Lower Cambrian, Hanfordian.

Long island, Kennebecasis river, New Brunswick.

Cotypes - Roy. Ont. Mus. Pal. 8354.

(Specimens B and C distinct from A)

BRADORIA ROBUSTA (Matthew) -- Metatype

*Bradorona perspicator maxima* Matthew

Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 445, pl. I, figs. 9a,b.

Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 22, pl. I, fig. 3.

Lower Cambrian, Etcheminian.

Dugald brook, Escasonie, Nova Scotia.

Metatype - Roy. Ont. Mus. Pal. 7720.

(Holotype of *B. perspicator maxima* Matthew)

BRADORIA ROBUSTA (Matthew) -- Metatype

*Bradorona perspicator magna* Matthew

Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 446, pl. I, figs. 11a,b.

Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 22, pl. I, fig. 5.

Lower Cambrian, Etcheminian.

Dugald brook, Escasonie, Nova Scotia.

Metatype - Roy. Ont. Mus. Pal. 7722.

(Holotype of *B. perspicator magna* Matthew)

BRADORIA ROBUSTA (Matthew) -- Metatype

*Bradorona perspicator major* Matthew

Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 446, pl. I, figs. 10a,b.

Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 22, pl. I, fig. 4.

Lower Cambrian, Etcheminian.

Dugald brook, Escasonie, Nova Scotia.

Metatype - Roy. Ont. Mus. Pal. 7761.

(Holotype of *B. perspicator major* Matthew)

BRADORIA RUGULOSA (Matthew) -- Cotypes 3
Matthew, G.F., Bull. Nat. Hist. Soc. N.B., No. 18, 1899, p. 205, pl. III, figs. 3a-d.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 21, pl. I, fig. 17.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7737.

BRADORIA RUGULOSA (Matthew) -- Metatypes 3
*Bradorona observator laevis* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 450.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 21.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Metatypes - Roy. Ont. Mus. Pal. 7707.
(Original types of *B. observator laevis* Matthew)

BRADORIA SCRUTATOR Matthew -- Cotypes 2
Matthew, G.F., Bull. Nat. Hist. Soc. N.B., No. 18, 1899, p. 204, pl. IV, figs. 1a-c.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 14, pl. I, fig. 11.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7772.

BRADORIA SPECTATOR (Matthew) -- Cotypes 8
*Bradorona spectator* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 447, pl. I, figs. 12a-d.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 25, pl. I, fig. 19.
Lower Cambrian, Etcheminian.
Boundary brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7735.
(Possibly synonymous with *B. perspicator* Matthew)

BRADORIA SPECTATOR SPINOSA (Matthew) -- Holotype
(*Bradorona spectator spinosa* Matthew)
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 448, pl. I, figs. 13a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 26, pl. I, fig. 20.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 7708.

BRADORIA SPECTATOR SPINOSA (Matthew) -- Paratypes 2
(*Bradorona spectator aequata* Matthew)
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 448, pl. I, figs. 14a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 26, pl. I, fig. 21.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Paratypes - Roy. Ont. Mus. Pal. 8181.
(Original types of *B. spectator aequata* Matthew)

BRADORIA ? STEADI (Matthew) -- Metatypes 2
*Leperditia steadi* Matthew
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VII, Sect. IV, 1889, p. 160.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 29.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Metatypes - Roy. Ont. Mus. Pal. 8448.
(U. & B. suggest affinities with *B. minor* Matthew)

BRADORIA SUBQUADRATA Ulrich & Bassler -- Cotypes 2
*Bradorona spectator acuta* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 447.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 20, pl. III, fig. 3.
Lower Cambrian, Etcheminian.
Dugald brook (Spec. A), Boundary brook (Spec. B), Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7706.

BRADORIA Sp. Ulrich & Bassler -- Onomatype
*Bradorona spectator acuta* Matthew
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 447.
Ulrich, E.O., & Bassler, R.S., Proc. U.S. Nat.Mus., Vol. LXXVIII, Art. 4, 1931, p. 20. Referred to as specimen C under *Bradoria subquadrata*.
Lower Cambrian, Etcheminian.
Escasonie, Cape Breton, Nova Scotia.
Onomatype - Roy. Ont. Mus. Pal. 26291.

BRADORIA VIGILANS Matthew -- Cotypes 2
Matthew, G.F., Bull. Nat. Hist. Soc. N.B., No. 18, 1899, p. 205, pl. IV, figs. 2a-c.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 16, pl. I, fig. 15.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7774.
(Specimens D & E of Matthew's types)

BRADORIA VIGILANS CONCENTRICA U. & B. -- Holotype
*Bradoria vigilans* Matthew
Matthew, G.F., Bull. Nat. Hist. Soc. N.B., No. 18, 1899, p. 205.
Ulrich, E.O., & Bassler, R.S.,Proc. U. S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 17.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 26293.
(Specimen C of Matthew's types)

ESCASONA INGENS Matthew -- Holotype
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 459, pl. II, figs. 7a-c.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 48, pl. I, fig. 31.
Lower Cambrian, Coldbrookian.
Dugald brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 8316.
(Unrecognizable)

ESCASONA VETUS Matthew -- Holotype
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 458, pl. II, figs. 6a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 49, pl. I, fig. 33.
Lower Cambrian, Etcheminian.
Boundary brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 7704.
(Unrecognizable)

HIPPONICHARION CAVATUM Matthew -- Cotypes 2
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. XI, Sect. IV, 1893, p. 99, pl. XVII, figs. 3a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 63, pl. VII, fig.32.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8425.

HIPPONICHARION EOS Matthew -- Holotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV, 1885, p. 64, pl. VI, figs. 19,19a,b.
Ulrich, E.O., & Bassler, R.S., Proc. U.S. Nat.Mus., Vol. LXXVIII, Art. 4, 1931, p. 62, pl. VII,fig. 31.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7897.

HIPPONICHARION MINUS Matthew -- Cotypes 3
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. XI, Sect. IV, 1893, p. 99, pl. XVII, figs. 4a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 63.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 7898.

INDIANA ? ACADICA (Matthew) -- Holotype
*Primitia acadica* Matthew
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV, 1885, p. 66, pl. VI, figs. 22,22a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 82, pl. IX, fig. 13.
Middle Cambrian, Acadian.
Porter's brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 8249.

INDIANA LIPPA Matthew -- Holotype (Cast & mold)
Matthew, G.F., Can. Rec. Sci., Vol. VIII, 1902, p. 463, pl. II, figs. 10a-d.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 70, pl. IX, figs. 1-4.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Holotype - Roy. Ont. Mus. Pal. 7792.

INDIANA PRIMAEVA (Matthew) -- Holotype
*Leperditia ? primaeva* Matthew
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 138, pl. VIII, figs. 6a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 77, pl. IX, fig. 9.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7683.

INDIANA PYRIFORMIS (Matthew) -- Cotypes 2
*Primitia pyriformis* Matthew
Matthew, G.F., Trans. Roy. Soc. Can., 2nd ser.,Vol. IV, Sect. IV, 1898, p. 132, pl. I, figs. 3a-c.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 72, pl. IX, fig. 11.
Lower Cambrian, Hanfordian.
Long island, King's county, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 7799.

INDIANA SECUNDA (Matthew) -- Holotype
*Aparchites secunda* Matthew
Matthew,G.F.,Trans. N.Y. Acad. Sci.,Vol. XIV, 1895, p. 136, pl. VII, figs. 11a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 71, pl. IX, fig. 5.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7679.

INDIANA SECUNDA (Matthew) -- Metatype
*Aparchites secunda* Matthew
Matthew,G.F.,Trans. N.Y. Acad. Sci.,Vol. XIV, 1895, p. 136.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 71.
Lower Cambrian, Hanfordian.
Long island, King's county, New Brunswick.
Metatype - Roy. Ont. Mus. Pal. 7681.

INDIANA SECUNDA (Matthew) -- Metatype
Matthew,G.F.,Trans. N.Y. Acad. Sci.,Vol. XIV, 1895, p. 136.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 71.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Metatype - Roy. Ont. Mus. Pal. 7680.

"LEPERDITIA" VENTRICOSA Matthew -- Cotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VII, Sect. IV, 1889, p. 159.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 100.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Cotype - Roy. Ont. Mus. Pal. 8434.
(Affinities very doubtful, not an ostracode)

LEPIDILLA ANOMALA Matthew -- Cotypes
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV, 1885, p. 62, pl. VI, figs. 18a-c; Vol. VIII, 1890, p. 130, pl. 11, fig. 2.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 100, pl. VII, figs. 20-23.
Middle Cambrian, Acadian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8191.
(Also the genotype)

LEPIDITTA ALATA Matthew -- Cotypes 2
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV, 1885, p. 61, pl. VI, figs. 16,16a.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 94, pl. VII, figs. 24,25.
Middle Cambrian, Acadian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8119.
(Also the genotype)

LEPIDITTA? AURICULATA Matthew -- Holotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. II, Sect. IV, 1893, p. 99, pl. XVII, figs. 2a,b.
Ulrich, E.O., & Bassler, R.S., Proc. U.S. Nat.Mus., Vol. LXXVIII, Art. 4, 1931, p. 96, pl. V, fig. 20.
Middle Cambrian, Acadian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 8287.

LEPIDITTA CURTA Matthew -- Cotypes 2
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. III, Sect. IV, 1885, p. 62, pl. VI, fig. 17.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 95, pl. V, figs. 18, 19; pl. VII, fig. 29.
Middle Cambrian, Acadian.
Porter's brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8118.

LEPIDITTA? SIGILLATA Matthew -- Holotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. XI, Sect. IV, 1893, p. 98, pl. XVII, fig. 1.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 96, pl. V, fig. 21; pl. VII, fig. 27.
Lower Cambrian, Hanfordian.
Hanford brook, St. Martins, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7743.

MONONOTELLA FUSIFORMIS (Matthew) -- Holotype
*Primitia(?) fusiformis* Matthew
Matthew,G.F., Trans. N.Y. Acad. Sci.,Vol. XIV,1895, p. 137, pl. VIII, figs. 3a,b.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII,Art. 4, 1931,p. 92, pl. VIII, fig. 22.
Lower Cambrian, Hanfordian.
Long island, Kennebecasis river, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 7762.

"SCHMIDTELLA? PERVATUS" Matthew -- Cotypes 2
Matthew, G.F., Bull. Nat. Hist. Soc. N.B., No. 18, 1899, p. 206, pl. IV, figs. 3a-c.
Ulrich, E.O., & Bassler, R.S.,Proc. U.S. Nat. Mus., Vol. LXXVIII, Art. 4, 1931, p. 27, pl. I, fig. 26.
Lower Cambrian, Etcheminian.
Dugald brook, Escasonie, Nova Scotia.
Cotypes - Roy. Ont. Mus. Pal. 7788.
(Unrecognizable)

## OSTRACODA

CYTHERELLA BENNIEI Jones, Kirkby, Brady -- Topotype
Girty, G.H., U.S.G.S., Bull. 436, 1910, p. 57.
Upper Carboniferous, Park City formation.
Thomas Fork, Wyoming.
Topotype - Roy. Ont. Mus. Pal. 6372.

HOLLINELLA OCCIDENTALIS (Girty) -- Paratype
*Hollina emacerata occidentalis* Girty
Girty, G.H., U.S.G.S., Bull. 436, 1910, p. 55.
Bassler, R.S., & Kellett, B., G.S.A., Spec. Paper, No. 1, 1934, p. 334.
Upper Carboniferous, Park City formation.
Thomas Fork Wyoming.
Paratype - Roy. Ont. Mus. Pal. 6370.

JONESINA CARBONIFERA Girty -- Paratype
Girty, G.H., U.S.G.S., Bull. 436, 1910, p. 56.
Upper Carboniferous, Park City formation.
Thomas Fork, Wyoming.
Paratype - Roy. Ont. Mus. Pal. 6371.

## CIRRIPEDIA

PLUMULITES MANUELENSIS Matthew -- Holotype
Matthew, G.F., Trans. N.Y. Acad. Sci., Vol. XV, 1896, p. 200, pl. XIV, fig. 7.
Middle Cambrian, Acadian.
Manuel brook, Conception bay, Newfoundland.
Holotype - Roy. Ont. Mus. Pal. 7849.

## PHYLLOCARIDA

CERATIOCARIS PUSILLUS Matthew -- Holotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser., Vol. VI, Sect. IV, 1888, p. 56, pl. IV, fig. 9.
Middle Silurian.
Cunningham brook, Nerepis, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 22701.

## ALGAE

GIRVANELLA (?) SILURIANA Parks -- Fragment of Holotype
Parks,W.A., Univ. Tor. Studies, geol. ser., No. 33, 1933, p. 32, pl. VI, fig. 8; pl. VII, fig. 1.
Silurian, La Vieille.
Black Cape, Quebec.
Fragment of Holotype - Roy. Ont. Mus. Pal. 23159.
(Holotype No. 13283 Peabody Museum)

GIRVANELLA (?) SILURIANA Parks -- Fragment of Topotype
Parks,W.A., Univ. Tor. Studies, geol. ser., No. 33, 1933, p. 32.
Silurian, La Vieille.
Black Cape, Quebec.
Fragment of Topotype - Roy. Ont. Mus. Pal. 23161.
(Topotype No. 13281 Peabody Museum)

HYDROCYTIUM(?) SICULUM Matthew -- Holotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VII, Sect. IV, 1889, p. 146, pl. VI, fig. 2.
Lower Cambrian, Etcheminian.
Radcliff's, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 8244.

PALAEOCHORDA SETACEA Matthew -- Cotypes 3
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VII, Sect. IV, 1889, p. 145, pl. VI, fig. 1.
Lower Cambrian, Etcheminian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8420.

PHYCOIDELLA STICHIDIFERA Matthew -- Cotypes 2
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VII, Sect. IV, 1889, p. 144, pl. V, figs. 5a-d.
Lower Cambrian, Etcheminian.
Hanford brook, St. Martins, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8312.

SOLENOPORA COMPACTA OUAREAUENSIS Fritz -- Cotypes 3
Fritz, M.A., Trans. Roy. Can. Inst., Vol. XXIII,pt. 2, No. 50, 1941, p. 157, pl. III, figs. 1-3.
Middle Ordovician, Black River.
Ouareau river, Quebec.
Cotypes - Roy. Ont. Mus. Pal. 23356.

ANGIOSPERMAE

ACER PLEISTOCENICUM Penhallow -- Cotype
Penhallow, D.P., Trans. Roy. Soc. Can., 2nd ser., Vol. X, Sect. IV, 1904, p. 72.
Coleman, A.P., Roy. Can. Inst.,Special Publication, "The Natural History of the Toronto Region,Ontario, Canada," 1913, fig. 1, opposite p. 71.
Pleistocene, Interglacial.
Don Brickyard, Toronto, Ontario.
Cotype - Roy. Ont. Mus. Pal. 20234.

ACER TORONTONIENSIS Penhallow -- Holotype
Penhallow, D.P., reference not located.
Coleman, A.P., Roy. Can. Inst.,Special Publication, "The Natural History of the Toronto Region,Ontario, Canada," 1913, fig. 2, opposite p. 71.
Pleistocene, Interglacial.
Don Brickyard, Toronto, Ontario.
Holotype - Roy. Ont. Mus. Pal. 20211.

# A D D E N D A

## STROMATOPOROIDEA

CLATHRODICTYON STRIATELLUM D'Orbigny - Plesiotypes 2
Way, H.G., MSS. Univ. Tor., "Silurian of Manitoulin island," 1936, pl. VII, figs. 6,8.
Middle Silurian, Assiginack member, Lockport.
Bidwell township, Manitoulin island, Ontario.
Plesiotypes - Roy. Ont. Mus. Pal. 21984.

CLATHRODICTYON VARIOLARE Von Rosen -- Plesiotype
Way, H.G., MSS. Univ. Tor., "Silurian of Manitoulin island," 1936, pl. VII, fig. 7.
Lower Silurian, Bidwell member, Cataract.
Near Kagawong, Manitoulin island, Ontario.
Plesiotype - Roy. Ont. Mus. Pal. 7613.

CLATHRODICTYON VESICULOSUM MINUTUM (Rominger) -- Plesiotypes 9
Way, H.G., MSS. Univ. Tor., "Silurian of Manitoulin island," 1936, pl. VII, fig. 5.
Lower Silurian, Bidwell member, Cataract.
Bidwell township, Manitoulin island, Ontario.
Plesiotypes - Roy. Ont. Mus. Pal. 7602.

STROMATOPORA GALTENSIS Dawson -- Plesiotypes 6
Parks, W.A., Univ. Tor. Studies, geol. ser., No. 4, 1907, p. 25, pl. IV, figs. 3,4.
Middle Silurian, Guelph.
Durham, Ontario.
Plesiotypes - Roy. Ont. Mus. Pal. 15063.

## ?HYDROZOA

TRISTYLOTUS HEXAGONUS Parks -- Cotypes 13
Parks,W.A.,Amer. Jour. Sci., Vol. XVIII, Aug. 1904, p. 140, figs. 1-6.
Middle Devonian.
Kwataboahegan river, Ontario.
Cotypes - Roy. Ont. Mus. Pal. 12978.

## ANTHOZOA

FAVOSITES FORBESI DYERENSIS Way -- Allotype
Way, H.G., MSS. Univ. Tor., "Silurian of Manitoulin island," 1936, p. 113.
Lower Silurian, Dyer Bay member, Clinton.
Billings township, Manitoulin island, Ontario.
Allotype - Roy. Ont. Mus. Pal. 7562.

FAVOSITES TUBEROIDES Grabau -- Cotype
Grabau, A.W., Michigan Geol. & Biol. Sur., Publication 2, Geol. ser. 1, 1909, p. 112, pl. XIV,fig. 2.
Middle Devonian, Upper Monroe.
Detroit river, opposite Amherstburg, Ontario.
Cotype - Roy. Ont. Mus. Pal. 22513.

FAVOSITES TUBEROIDES Grabau -- Cotype
Grabau, A.W., Michigan Geol. & Biol. Sur., Publication 2, Geol. ser. 1, 1909, p. 112.
Middle Devonian, Upper Monroe.
Detroit river, opposite Amherstburg, Ontario.
Cotype - Roy. Ont. Mus. Pal. 22514.

HELIOPHRENTIS ALTERNATUM MAGNA Grabau -- Holotype
Grabau, A.W., Michigan Geol. & Biol. Sur., Publication 2,Geol. ser. 1, 1909, p. 101,pl. XIII, fig. 6.
Middle Devonian, Upper Monroe.
Detroit river, opposite Amherstburg, Ontario.
Holotype - Roy. Ont. Mus. Pal. 22486.

ROMINGERIA UMBELLIFERA (Billings) -- Plesiotype
*Aulopora umbellifera* Billings
Grabau, A.W., Michigan Geol. & Biol. Sur., Publication 2, Geol. ser. 1, 1909, p. 108, pl. XIV,fig. 7.
Middle Devonian, Upper Monroe.
Detroit river, opposite Amherstburg, Ontario.
Plesiotype - Roy. Ont. Mus. Pal. 22497.

SYNAPTOPHYLLUM MULTICAULE (Hall) -- Plesiotype
*Syringopora multicaule* Hall
Grabau, A.W., Michigan Geol. & Biol. Sur., Publication 2, Geol. ser. 1, 1909, p. 105, pl. XII, fig. 6.
Middle Devonian, Upper Monroe.
Detroit river, opposite Amherstburg, Ontario.
Plesiotype - Roy. Ont. Mus. Pal. 22459.

## CYSTOIDEA

APIOCYSTITES ELEGANS Hall -- Plesiotype
Schuchert, C., Smith. Misc. Coll., Vol. 47, pt. 2, 1904, pl. XXXIV, figs. 4,5.
Middle Silurian, Rochester.
Grimsby, Ontario.
Plesiotype - Roy. Ont. Mus. Pal. 21011.

CALLOCYSTITES CANADENSIS (Billings) -- Plesiotype
Schuchert, C., Smith. Misc. Coll., Vol. 47, pt. 2, 1904, pl. XXXIV, fig. 3.
Middle Silurian, Rochester.
Grimsby, Ontario.
Plesiotype - Roy. Ont. Mus. Pal. 21186.

CALLOCYSTITES JEWETTII Hall -- Plesiotype
Schuchert, C., Smith. Misc. Coll., Vol. 47, pt. 2, 1904, pl. XXXIV, figs. 1,2.
Middle Silurian, Rochester.
Grimsby, Ontario.
Plesiotype - Roy. Ont. Mus. Pal. 21185.

## BRACHIOPODA

HOMOEOSPIRA SOBRINA (Beecher & Clarke)-Tophomeotypes 3
Beecher, C.E., & Clarke, J.M., Mem. 1, N.Y. State Mus., 1889, p. 61.
Middle Silurian, Niagaran.
Waldron, Indiana.
Tophomeotypes - Roy. Ont. Mus. Pal. 25942.

LINGULA ROTUNDA Parks -- Holotype
Parks, W.A., Trans. Roy. Soc. Can., 3rd ser., Vol. XXII, Sect. IV, 1928, p. 76, pl. I, fig. 25.
Middle Ordovician, Upper Cobourg.
Collingwood, Ontario.
Holotype - Roy. Ont. Mus. Pal. 24115.

PELECYPODA

CORBULA SPHERIOIDES Russell -- Holotype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287, pl. XLIX, fig. 4.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Holotype - Roy. Ont. Mus. Pal. 24831.

CORBULA SPHERIOIDES Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24832.

CORBULA SPHERIOIDES Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287, pl. XLIX, fig. 5.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24833.

CORBULA SPHERIOIDES Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287, pl. XLIX, fig. 6.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24834.

CYMBOPHORA GRATIAE Russell -- Holotype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 283, pl. XLVII, fig. 1.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Holotype - Roy. Ont. Mus. Pal. 24844.

CYMBOPHORA GRATIAE Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 283, pl. XLVII, fig. 2.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24845.

CYMBOPHORA GRATIAE Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 283, pl. XLVII, figs. 3,4.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24846.

CYMBOPHORA GRATIAE Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 283, pl. XLVII, fig. 5.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24847.

GERVILLIA BIRUGATA Russell -- Holotype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 286, pl. XLVII, fig. 1.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Holotype - Roy. Ont. Mus. Pal. 24835.

LAEVICARDIUM HOLMESI Russell -- Holotype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 284, pl. XLVII, fig. 6.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Holotype - Roy. Ont. Mus. Pal. 24848.

LAEVICARDIUM HOLMESI Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 284, pl. XLVII, figs. 8,9; pl. XLIX, fig. 8.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24849.

LAEVICARDIUM HOLMESI Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 284, pl. XLVII, fig. 7.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24850.

LAEVICARDIUM HOLMESI Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 284, pl. XLIX, fig. 7.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24851.

OXYTOMA NEBRASCANA var.?(Evans & Shumard)-Fig.specimen
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 285, pl. XLVIII, fig. 5.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Figured Specimen - Roy. Ont. Mus. Pal. 24830.

SAXICAVA LEVIS Russell -- Holotype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287, pl. XLIX, fig. 2.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Holotype - Roy. Ont. Mus. Pal. 24836.

SAXICAVA LEVIS Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287, pl. XLIX, fig. 3.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24837.

SAXICAVA LEVIS Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24838.

SAXICAVA LEVIS Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24839.

SAXICAVA LEVIS Russell -- Paratype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 287.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Paratype - Roy. Ont. Mus. Pal. 24840.

TANCREDIA AMERICANA CUPRESSENSIS Landes -- Plesiotype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 285, pl. XLVIII, figs. 1,2.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Plesiotype - Roy. Ont. Mus. Pal. 24841.

TANCREDIA AMERICANA CUPRESSENSIS Landes -- Plesiotype
Russell, L.S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 285, pl. XLVIII, fig. 3.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Plesiotype - Roy. Ont. Mus. Pal. 24842.

TANCREDIA AMERICANA CUPRESSENSIS Landes -- Plesiotype
Russell, L. S., Jour. Pal., Vol. XVII, No. 3, 1943, p. 285, pl. XLVIII, fig. 4.
Upper Cretaceous, Eastend.
South of Eastend, Saskatchewan.
Plesiotype - Roy. Ont. Mus. Pal. 24843.

GASTROPODA

CLATHROSPIRA SUBCONICA Hall -- Plesiotype
Parks,W.A., & Fritz,M.A.,31st Ann. Rept. Ont. Dept. Mines, Vol. XXXI, pt. IX, 1922, p. 5, pl. I,fig. 9.
Middle Ordovician, Trenton.
Toronto, Ontario (drift specimen).
Plesiotype - Roy. Ont. Mus. Pal. 23603.

CAMPELOMA PRAECURSA Dyer -- Metatypes 15
Dyer, W.S., Nat. Mus. Canada, Bull. 63, 1930, p.11.
Upper Cretaceous, Foremost.
Near Chin Coulee, Alberta.
Metatypes - Roy. Ont. Mus. Pal. 10945.

CAMPELOMA VETULA TENUIS Dyer -- Metatypes 3
Dyer, W.A., Nat. Mus. Canada, Bull. 63, 1930, p.10.
Upper Cretaceous, Foremost beds.
Southern Alberta.
Metatypes - Roy. Ont. Mus. Pal. 10946.

GONIOBASIS JUDITHENSIS MINIMUS Dyer -- Metatypes 10
Dyer, W.S., Nat. Mus. Canada, Bull. 63, 1930, p.12.
Upper Cretaceous, Pale beds.
Little Bow river, Alberta.
Metatypes - Roy. Ont. Mus. Pal. 10930.

GONIOBASIS WEBBI Dyer -- Metatypes 8
Dyer, W.S., Nat. Mus. Canada, Bull. 63, 1930, p.13.
Upper Cretaceous, Edmonton.
Bow river, Alberta.
Metatypes - Roy. Ont. Mus. Pal. 10935.

GONIOBASIS WHITTAKERI Dyer -- Metatypes 3
Dyer, W.S., Nat. Mus. Canada, Bull. 63, 1930, p.12.
Upper Cretaceous, St. Mary River.
Near Nobleford, Alberta.
Metatypes - Roy. Ont. Mus. Pal. 10929.

GONIOBASIS WILLIAMSI Dyer -- Metatypes 11
Dyer, W.S., Nat. Mus. Canada, Bull. 63, 1930, p.12.
Upper Cretaceous, Pale beds.
Southern Alberta.
Metatypes - Roy. Ont. Mus. Pal. 10947.

VIVIPARUS TASGINA Dyer -- Metatypes 2
Dyer, W.S., Nat. Mus. Canada, Bull. 63, 1930, p.10.
Upper Cretaceous, Edmonton.
Bow river, Alberta.
Metatypes - Roy. Ont. Mus. Pal. 10934.

## MARKINGS

GONIADICHNITES TRICHIFORMIS Matthew -- Cotypes 6
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VIII, Sect. IV, 1890, p. 160, pl. XI, fig. 12.
Upper Cambrian, St. John Group, Div. $C_2a$.
Caton's island, King's county, New Brunswick.
Cotypes - Roy. Ont. Mus. Pal. 8253.

MEDUSICHNITES (form B) Matthew -- Cotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VIII, Sect. IV, 1890, p. 145, pl. XII, fig. 2.
Upper Cambrian, St. John Group, $C_2a$.
Tabor's Bridge, New Brunswick.
Cotype - Roy. Ont. Mus. Pal. 8468.

MONOCRATERION MAGNIFICUM Matthew -- Holotype
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser.,Vol. VIII, Sect. IV, 1890, p. 161, pl. XVI, fig. 1.
Upper Cambrian, St. John Group, $C_2c$.
Courtney bay, near St. John, New Brunswick.
Holotype - Roy. Ont. Mus. Pal. 8266.

ARENICOLITES ANTIQUATUS (Billings) --, Topotypes 2
*Arthraria antiquatus* Billings
Billings,E.,Pal. Foss.,Vol. II, Pt. 1, p. 66,fig.33.
Upper Cambrian, St. John Group, $C_2c$.
Great Bell island, Newfoundland.
Topotypes - Roy. Ont. Mus. Pal. 8103.

RENICOLITES BREVIS Matthew -- Metatypes 3
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser., Vol. VIII, Sect. IV, 1890, p. 159, pl. XI, figs. 13a,b,c.
Upper Cambrian, St. John Group, $C_2c$.
Simonds, New Brunswick.
Metatypes - Roy. Ont. Mus. Pal. 8052.

CTENICHNITES INGENS Matthew -- Metatypes 13
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser., Vol. VIII, Sect. IV, 1890, p. 151.
Upper Cambrian, St. John Group, $C_2c$.
St. John, New Brunswick.
Metatypes - Roy. Ont. Mus. Pal. 8096.

CTENICHNITES INGENS Matthew -- Metatypes 6
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser., Vol. VIII, Sect. IV, 1890, p. 151.
Upper Cambrian, St. John Group, $C_2c$.
Vicinity St. John, New Brunswick.
Metatypes - Roy. Ont. Mus. Pal. 8023.

EOICHNITES LINNAENUS Torrell -- Topotypes 15
Matthew, G.F., Trans. Roy. Soc. Can., 1st ser., Vol. VIII, Sect. IV, 1890, p. 148, pl. XIII, figs. 2-6.
Upper Cambrian, St. John Group, $C_2c$.
St. John, New Brunswick.
Topotypes - Roy. Ont. Mus. Pal. 7794.

## INCERTAE SEDIS

HELENIA GRANULATA Matthew -- Cotypes 2
Matthew, G.F., Bull. Nat. Hist. Soc. N.B., Vol. IV, 1899, p. 192, pl. II, figs. 7a-e.
Lower Cambrian, Etcheminian.
Smith's sound, Newfoundland.
Cotypes - Roy. Ont. Mus. Pal. 8344.

EXCHANGE
ROYAL ONTARIO MUSEUM